

REMARKS/ARGUMENTS

Claims 39-45 and 47-80 are presently pending in this case. Claims 57-77 are withdrawn but are retained and amended for the Office's consideration of rejoining these non-elected claims to the elected claims upon agreeing that the elected subject matter is allowable.

Claims 39 and 54 are amended to define that the DL matrix material is silicon and/or silicon carbide based on the disclosure on page 5, 1st paragraph of the originally filed application.

No new matter is added.

The newly applied rejection applied under 35 USC 103(a) citing Imai can be withdrawn as Imai does not describe nor would have reasonably suggested that the DL matrix material is silicon and/or silicon carbide as recited in the amended claims submitted in this paper.

Imai describes a method of producing diamond by chemical vapor deposition, which deposition of the diamond occurs on a substrate which comprises diamonds dispersed in a matrix. As described by Imai the matrix must have particular characteristics to be suitable for the diamond growth on the substrate. First, the melting point of the matrix must not exceed 1400°C, see column 5, lines 23 to 25 and claim 1. Second, the matrix material must not react strongly with carbon to give stable carbides, see column 5, lines 25 to 29. In Table 1 of Imai, there is a listing with those metals that have preferable properties and those that have undesirable properties, noting the inclusion of Si in both categories that are undesirable.

Silicon carbide has a melting point of 2730°C which exceeds 1400°C and is therefore not a suitable matrix material for Imai. Silicon reacts strongly with carbon to form a stable silicon carbide (see also Table 1 of Imai) and is therefore not a suitable matrix material for Imai. Thus, the substrate of Imai does not, and cannot, comprise diamond particles in either a

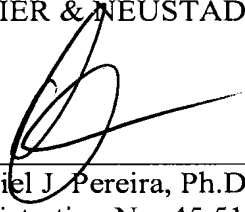
silicon carbide matrix or a silicon matrix. see **MPEP § 2141.02** (prior art must be considered in its entirety, including disclosures that teach away from the claims) and **MPEP § 2143.01** (proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference).

Reconsideration and withdrawal of the rejection is requested.

A Notice of Allowance is also requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Daniel J. Pereira', is written over a horizontal line.

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